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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,268	08/14/2006	Ines Pietsch	294539US0PCT	6047
22850	7590	04/30/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KWAK, JAE J	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			04/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/589,268	PIETSCH ET AL.	
	Examiner	Art Unit	
	JAE KWAK	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's newly added claims 15-20 filed on 02/13/2009 have been fully considered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Weiser et al. (US Patent 5,342,916) in view of Pabst et al. (WO 03/016578). (For convenience, the English language equivalent US 6,881,356, will be referred to below.)

Regarding claims 1-6: Weiser et al. teaches a process for preparing a polymer powder (abstract) by spraying the polymer powder with a spraying aid/spray assistant of sulfonated phenols (Abstract, and Col. 5, lines 54 to Col. 6 line 3).

Not taught by Weiser et al., is the specific reaction product called "spray assistant A" which includes an aliphatic aldehyde and the sodium sulfite and dihydroxydiphenyl sulfone. However, Pabst et al. teaches a process for preparing a novel solution (spray assistant A) of sulfone-containing tanning materials having a dihydroxydiphenyl sulfone, an aliphatic aldehyde of 1 to 6 carbon atoms per mole and the sodium sulfite per mole of dihydroxydiphenyl sulfone [DHDPS] at from 90° to 180° (See the abstract). Furthermore, Pabst et al. teaches the isomer of dihydroxydiphenyl sulfones including the 4,4'-dihydroxydiphenyl sulfone compound. (Col. 3, line 40) along with an aqueous solution consisting dihydroxy-diphenyl sulfone is under pressure

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(Col. 4, line 26). Also Pabst et al. teaches that the pH less than or equal to seven of aqueous solution can be achieved by adding an alkali metal hydroxide or ammonia (Col. 4 lines 9-14). Lastly, Pabst et al. teaches a process of mixing 30-70 Wt% of component A (Col. 4 line 50) with component B/spray assistant A (Col. 4 line 53). Weiser et al. and Pabst et al. are analogous art because they are both concerned with the same field of endeavor, namely a process of preparing aqueous composition comprising polymer powder and sulfones. At the time of invention a person having ordinary skill in art would have found it obvious to substitute solution "spray assistant A" of Pabst et al. into the process of spraying the polymer powder taught by Weiser et al. and would have motivated to do so for such desirable properties to tanning materials with a good tanning effect and good penetration that will provide leathers having good fastness, softness and fullness.

3. Claims 7-10, 12, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiser et al. (US patent 5,342,916) in view of Pabst et al. as applied to claim 1 above, and further in view of Weitzel et al. (US Patent 6,127,483)

4. Regarding claims 7, 8, 12, 20: Weiser et al. teach the basic claimed process as set forth above. Not taught is amount of "spray assistant A" per weight of polymer or amount polymer. However, Weitzel et al. teach the formulation of paint or coating composition (Col. 1, line 13) comprising 20-80% by weight of salt forming monomers (Col. 1 line 53) such as styrenesulfonic acid (Col. 3 line 66) and 0-50% by weight of anhydrides (Col. 1 line 56) with an amount is based on the total weight of copolymer (Col. 1 line 54). Weitzel also teaches amount of polymer such as 50-90 Wt % of vinyl ester-ethylene copolymer/vinyl acetate (Col. 1 lines 40-50, Col. 2 lines

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30-59, Col. 4 line 12). Therefore the Wt% of water soluble overlaps instant claimed Wt%.

Weiser et al. and Weitzel et al. are analogous art because they are both concerned with same field of endeavor, namely a process of preparing redispersible composition in aqueous solutions.

At the time of invention a person having ordinary skill in art would have been found it obvious to combine amount of water soluble copolymer into the process of spraying the polymer powder taught by Weiser et al. and would have motivated to do so for such desirable properties to improve polymers that can be easily redisperse in water and in a spray drying application used in building industry.

Regarding claim 9: While Weiser et al. dose not directly teach that the glass transition temperature of polymer is between -60 to +150 °C, but polymer such as poly(vinyl chloride) is at 82°C (“Engineered Materials Handbook” 1995 Desk-edition) since polyvinyl chloride is present in the polymer composition it is implicit that the polymer would have these glass transition temperature properties. If it is applicants’ position that this would be not be the case: (1) evidence would need to be present to support applicants' positions, and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain a polymer with these properties.

Regarding claim 10: Not taught is antiblocking agent. However, Weitzel et al. teaches antiblocking agents such as talc and dolomite (Example 2). At the time of invention a person having ordinary skill in art would have been found it obvious to combine the antiblocking agents with a polymer powder taught by Weiser et al. and would have motivated to do so for such desirable properties to improve polymers by preventing conglutination during redispersion in water and in a spray drying application used in building industry.

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5. Claims 1, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitzel et al. (US Patent 6,127,483) in view of Pabst et al. (WO 03/016578 corresponds to the US Patent 6,881,356).

Regarding claims 1, 11, 13: Weitzel et al. discloses a dispersion-powder composition comprising a vinyl ester-ethylene copolymer, which is obtained by spraying method (Abstract and Col. 4 lines 43-44). Weitzel et al. is silent on “spray assistant A” presence in the polymer dispersion. However, Pabst et al. teaches a process for preparing a solution of sulfone containing tanning materials having a dihydroxydiphenyl sulfone, an aliphatic aldehyde of 1 to 6 carbon atoms per mole and the sodium sulfite per mole of dihydroxydiphenyl sulfone [DHDPS] at from 90 to 180 degree (Abstract). Weitzel et al. and Pabst et al. are analogous art because they are both concerned with the same field of endeavor, namely a process of preparing redispersible composition in aqueous solutions. At the time of invention a person having ordinary skill in art would have been found it obvious to substitute the component B solution into the process of spraying the polymer powder taught by Weitzel et al. and would have motivated to so for such desirable properties to improve polymers that can be easily redisperse in water and in a spray drying application used in building industry.

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6. Claims 15-17, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitzel et al. (US Patent 6,127,483) in view of Pabst et al. as applied to claim 1 above, and further in view of Sandor et al. (US Patent 6,469,135)

Regarding claims 15-16, 18-19: Weitzel et al. teaches the basic claimed process as set forth above paragraph 5. Not taught is size of polymer particles used in spraying dry process. However, Sandor et al. teaches a process of preparing polymer powder (abstract) with dispersed polymer particle having a less than 100nm of weight average diameter (Col. 7 line 7) which reads on the newly added instant claims. Weitzel et al. and Sandor et al. are analogous art because they are both concerned with the same field of endeavor, namely a process of preparing redispersible composition in aqueous solutions. At the time of invention a person having ordinary skill in art would have found it obvious to combine the polymer powder size into the process of spraying the polymer powder taught by Weitzel et al. and would have motivated to do so for such desirable properties to improve polymers that can be easily redisperse in water and in a spray drying application used in building industry.

Regarding claims 17: Weitzel et al. teach 20-80% by weight of salt forming monomers (Col. 1 line 53) such as styrene sulfonic acid (Col. 3 line 66) and 0-50% by weight of anhydrides (Col. 1 line 56) with amount is based on the total weight of copolymer (Col. 1 line 54). Weitzel et al. also teaches amount of polymer such as 50-90 Wt% vinyl ester-ethylene copolymer/vinyl acetate (Col. 1 lines 40-50, Col. 2 lines 30-59, Col. 4 line 12). Therefore, the Wt% of water soluble overlaps instant claimed Wt%.

Response to Amendment

Applicant's arguments filed 02/13/2009 have been fully considered but they are not persuasive, because:

A) Applicant's argument that in regards to none of the cited references discloses of suggests a spray drying process in which the spray assistant A is not persuasive because as noted above Weiser et al. teaches that tanning agent can be used as spraying aids for redispersible polymer powders (Col. 1 lines 12-14, Col. 5 line 55-57) along with Weitzel et al. teaches spray drying dispersion (Col. 1 line 7). Weiser et al. and Weitzel et al. does not teach preparing spray assistant A's reagents. But Pabst et al. teaches preparing component B (abstract) by reacting **dihydroxydiphenyl sulfone, aliphatic aldehyde, sodium sulfite**, which reads on as reaction product of "spray assistant A", as well as the instant claim does not require that exact process rather only the product thereof since the claim reads "which was" (claim 1 line 4) therefore can be broadly interpreted as not being a "Positive step" in the instant process. So that a person having ordinary skill in art would have expect that a simple substitution of solution system assistant A in spray drying process in the art would be successful.

B) Applicant's argument that in regards to Pabst et al. does not disclose aromatic sulfonic acid structure is not persuasive because the **dihydroxydiphenyl sulfone** (Col. 4 line 18) is an aromatic sulfonic acid structure. See discussion in the rejection above.

C) Applicant's arguments that in regards to no expectation of improve whiteness for polymer powder dispersion is not persuasive because first whiteness of polymer powder is not claimed, secondly while Weitzel et al. teaches alkylarylsulfonic acid (Col. 3 line 55) as dispersants but does not directly teach the dihydroxydiphenyl sulfone taught by Pabst et al. As

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discussed above when all of the components are present or combined it is implicit that the preparing compositions would have these properties, namely “no pronounced coloration”. If it is applicants’ position that this would not be the case: (1) evidence would need to be present to support applicants’ positions; and (2) it would be the Office’s position that the application contains inadequate disclosure that there is no teaching as to how to obtain a composition with these properties.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAE KWAK whose telephone number is (571)270-7339. The examiner can normally be reached on Monday to Friday 8:30 A.M. EST 5:30 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

J.K.